CLAIMS

What is claimed is:

1. A software system for use in providing a web service interface for a billing service, wherein a plurality of first billing functions is provided by said billing service to computing applications residing on one or more computing devices in a distributed network, the software system comprising:

a. a web service interface defined for a billing service, said web service interface being adapted for coupling to a billing engine, said billing engine residing on a computing device in said distributed network and being adapted to perform said plurality of first billing functions, said web service interface comprises a plurality of application programming interfaces, each of said application programming interfaces being associated with a first billing function and being implemented such that the first billing function associated therewith is performed after a web service invocation that commands performance of said first billing function is received by said web service interface; and

b. a plurality of object classes, each of said object classes defining objects for storing data utilized by said billing engine and for communicating said data to said billing engine through at least one implemented application programming interface of said web service interface,

said web service interface being used to provide said billing service as a web service that can be invoked by said computing applications in said distributed network.

2. The software system as claimed in claim 1, wherein said web service interface is extendable to provide said computing application with a plurality of second billing functions, and said billing engine is adapted to perform said second billing functions.

3. The software system as claimed in claim 1, wherein said billing service is a billing account service, and wherein the web service interface defined for said billing account service comprises

application programming interfaces associated with at least one of the following first billing functions:

i. creating billing accounts;
ii. deleting billing accounts;
iii. creating records of billing events in a billing account;
iv. setting the status of a billing account;
v. obtaining the status of a billing account; and
vi. obtaining an invoice for a billing account.

4. The software system as claimed in claim 1, wherein said billing service is a rating service, and wherein the web service interface defined for said rating service comprises application programming interfaces associated with at least one of the following first billing functions:

i. registering billable services;
ii. obtaining a billing rate package for a billable service;
iii. subscribing a billable service for a billing account;
iv. unsubscribing a billable service for a billing account;
v. obtaining subscribed billable service instances for a billing account; and
vi. processing billing events.

5. The software system as claimed in claim 1, wherein said plurality of object classes define one or more of the following objects:

i. billing accounts;
ii. billing events;
iii. billing rate packages;
iv. billable services;
v. billing subscriptions; and
vi. billable service instances.

6. A computer-readable medium upon which a set of software components is stored, said

software components for use in providing a web service interface for a billing service, wherein a plurality of first billing functions is provided by said billing service to computing applications residing on one or more computing devices in a distributed network, the set of software components comprising:

a. a web service interface for a billing service, said web service interface being adapted to be coupled to a billing engine, said billing engine residing on a computing device in said distributed network and being adapted to perform said plurality of first billing functions, said web service interface comprising a plurality of application programming interfaces, each of said application programming interfaces being associated with a first billing function, each of said application programming interfaces being implemented such that the first billing function associated therewith is performed after a web service invocation that commands performance of said first billing function is received by said web service interface; and

b. a plurality of object classes, each of said object classes defining objects for storing data utilized by said billing engine and for communicating said data to said billing engine through at least one implemented application programming interface of said web service interface,

said web service interface being used to provide said billing service as a web service that can be invoked by said computing applications in said distributed network.

7. The computer-readable medium as claimed in claim 6, wherein said web service interface is extendable to provide said computing application with a plurality of second billing functions, and said billing engine is adapted to perform said second billing functions.

8. The computer-readable medium as claimed in claim 6, wherein said billing service is a billing account service, and the web service interface defined for said billing account service comprises application programming interfaces associated with one or more of the following first billing functions:

i. creating billing accounts;

ii. deleting billing accounts;

iii. creating records of billing events in a billing account;

iv. setting the status of a billing account;

v. obtaining the status of a billing account; and

vi. obtaining an invoice for a billing account.

9. The computer-readable medium as claimed in claim 6, wherein said billing service is a rating service, and the web service interface defined for said rating service comprises application programming interfaces associated with one or more of the following first billing functions:

i. registering billable services;

ii. obtaining a billing rate package for a billable service;

iii. subscribing a billable service for a billing account;

iv. unsubscribing a billable service for a billing account;

v. obtaining subscribed billable service instances for a billing account; and

vi. processing billing events.

10. The computer-readable medium as claimed in claim 6, wherein said plurality of object classes define one or more of the following objects:

i. billing accounts;

ii. billing events;

iii. billing rate packages;

iv. billable services;

v. billing subscriptions; and

vi. billable service instances.

11. A web service interface for a billing service for providing a plurality of first billing functions to computing applications residing on one or more computing devices in a distributed network, and wherein:

a) said web service interface is adapted for coupling to a billing engine;

b) said billing engine resides on a computing device in said distributed network and is adapted to

perform said plurality of first billing functions;

c) said web service interface comprises a plurality of application programming interfaces;

d) each of said application programming interfaces is associated with a first billing function; and

e) each of said application programming interfaces can be implemented such that the first billing function associated therewith is performed after a web service invocation that commands performance of said first billing function is received by said web service interface;

whereby said web service interface is used to provide said billing service as a web service that can be invoked by said computing applications in said distributed network.

12. The web service interface as claimed in claim 11, wherein said web service interface is extendable to provide said computing application with a plurality of second billing functions, wherein said billing engine is adapted to perform said second billing functions.

13. The web service interface as claimed in claim 11, wherein said billing service is a billing account service, and wherein the web service interface defined for said billing account service comprises application programming interfaces associated with the following first billing functions:

i. creating billing accounts;
ii. deleting billing accounts;
iii. creating records of billing events in a billing account;
iv. setting the status of a billing account;
v. obtaining the status of a billing account; and
vi. obtaining an invoice for a billing account.

14. The web service interface as claimed in claim 11, wherein said billing service is a rating service, and wherein the web service interface defined for said rating service comprises application programming interfaces associated with the following first billing functions:

i. registering billable services;
ii. obtaining a billing rate package for a billable service;

iii. subscribing a billable service for a billing account;

iv. unsubscribing a billable service for a billing account;

v. obtaining subscribed billable service instances for a billing account; and

vi. processing billing events.

15. The web service interface as claimed in claim 11, wherein data is communicated to said billing engine through at least one implemented application programming interface of said web service interface in at least one object selected from the following group:

i. billing account object;

ii. billing event object;

iii. billing rate package object;

iv. billable service object;

v. billing subscription object; and

vi. billing service instance object.

16. The use of a billing service for which a web service interface is defined, wherein a plurality of billing functions is provided by said billing service to computing applications residing one on or more computing devices in a distributed network, and wherein:

a) said web service interface is adapted for coupling to a billing engine;

b) said billing engine resides on a computing device in said distributed network and is adapted to perform said plurality of first billing functions;

c) said web service interface comprises a plurality of application programming interfaces;

d) each of said application programming interfaces is associated with a first billing function; and

e) each of said application programming interfaces can be implemented such that the first billing function associated therewith is performed after a web service invocation that commands performance of said first billing function is received by said web service interface;

whereby said web service interface is used to provide said billing service as a web service that

can be invoked by said computing applications in said distributed network.

17. The use of a billing service, as claimed in claim 16, wherein the first billing functions of said billing service are performed by a lightweight billing engine.